REMARKS

I. Status of Claims:

Claims 1 and 3-34 are in this application and are presented for consideration. By this Amendment, Applicants has amended claims 1, 13, 19, 24, and 29 to emphasize the combination of features which define over the prior art of record.

Applicants request that the Examiner reconsider the application in light of the amended claims and in light of the remarks below.

II. Claim Rejections Under 35 U.S.C. §112:

The Examiner rejected claims 1 and 3-34 under 35 U.S.C. §112, first paragraph, for failing to comply with the Written Description Requirement.

In response, Applicants have amended the independent claims to address the Examiner's concerns. The amendments to the claims are submitted as overcoming the Examiner's rejections under 35 U.S.C. §112.

III. Claim Rejections Under 35 U.S.C. §102(b):

The Examiner rejected claims 1, 3-7, 10-14, 19, 20, 22, 23, and 31-34 under 35 U.S.C.

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§102(b) as being anticipated by the U.S. Patent No. 6,054,050 to Dyke (the "Dyke '050" reference, hereinafter).

The Dyke '050 reference discloses a process for removing soluble and insoluble organic and inorganic contaminants from refinery wastewater streams where the wastewater stream is cooled to approximately 110° F. The stream then flows under its own pressure. This is specifically recited in col. 6, lines 47-50 as follows: *"In the demonstration test, the refinery wastewater stream was cooled to about 110° F. and then flowed continuously under its own pressure down through one of two multi-media sandfilters."* (Col. 6, lines 47-50).

The refinery water stream needs to be cooled because the temperature from such refinery is typically at a very high temperature.

Applicants have amended the independent claims of the present application to include the combination of features where the osmosis membrane can process within the desired process parameter temperatures up to 185° F. Therefore, it is clear that the Dyke '050 reference does not anticipate nor could it suggest the combination of features of the present invention, since the device is not capable of separating molecular species at such high temperature.

The Examiner rejected claims 1, 6-10, 12-22, 24-31, 33, and 34 under 35 U.S.C. §102(e) as being anticipated by the U.S. Patent No. 6,537,456 to Mukhopadhyay (the "Mukhopadhyay '456" reference, hereinafter).

The Mukhopadhyay '255 reference discloses a water treatment method that involves removing the hardness from the raw feedwater stream, removing the alkalinity from the raw feedwater stream, or removing the dissolved gases created during the hardness removal step, and then raising the pH level of the feedwater to at least 8.5 or about 12 or more. The application of the Mukhopadhyay '255 reference is specifically geared toward contaminants that include organic or inorganic materials. Specifically, as col. 26, lines 22-48 discloses, the biological fouling is a contamination that usually occurs in a low temperature and the usual biological contaminants usually can not survive in the range of temperatures which can go all the way up to 185° F.

Furthermore, the Mukhopadhyay '255 reference specifically states that the reference does not have anything to do with a process that involves hydrocarbon and or chemical processing by hydrocarbon or chemical processing equipment. This is specifically recited in claim 3, lines 40-45 of the Mukhopadhyay '255 reference, wherein it states as follows: *"Moreover, his application pertains to, and is described and claimed with respect to oil field produced waters containing hydrocarbon compounds (containing carbon and hydrogen only, and generally not ionizable*

[Ed. Note: referring to another prior art]*), whereas in applications which are of interest to me, such compounds are almost totally lacking."* (Col. 3, lines 40-45).

The independent claims of the present invention all include the combination of features where the reverse osmosis system is capable of withstanding water temperatures going all the way up to 185° F. Such feature is not disclosed any where in the Mukhopadhyay '255 reference. In fact, the Mukhopadhyay does not discuss any feature relating to temperatures. Furthermore, because the Mukhopadhyay '255 reference discloses biological contaminants, it is clear that the application of the Mukhopadhyay '255 reference involves a reverse osmosis system that cannot withstand water temperatures of up to 185° F. that is directly connected to the water feed of that temperature.

More importantly, the present invention as claimed provides for the water feed that is in line with a process water exposed to hydrocarbon and or chemical processing by hydrocarbon or chemical processing equipment. The Mukhopadhyay '255 reference specifically states that such hydrocarbon compounds are *totally lacking in his applications*. Therefore, it is clear that the Mukhopadhyay '255 reference neither anticipates nor suggests the present invention as claimed.

Although the Office Action does not state that the U.S. Pat. No. 7,186,344 to Hughes (the "Hughes '344" reference, hereinafter) anticipate or suggest the present invention as claimed, the Examiner's Interview Summary issued on June 19, 2007 cite this particular reference.

Applicants note that the Hughes '344 reference does not provide any features where the reverse osmosis system can process desired parameters in water feed temperatures up to 185° F. Further, claim 13 has been amended to emphasize the typical range of temperatures from stripped sour water disavowed by the U.S. Pat. No. 6,071,413 to Dyke.

IV. Claim Rejections – 35 U.S.C. §103(a):

The Examiner rejects claim 23 under 35 U.S.C. §103(a) as being unpatentable over the Mukhopadhyay '255 reference in view of the Dyke '050 reference.

Claim 23 indirectly depends on the independent claim 19. Thus, claim 19 also claims the combination of features where the reverse osmosis system can withstand water temperatures of up to 185°. This processing involves chemical compounds such as hydrocarbon and or chemical processing by hydrocarbon or chemical processing equipment. All these features are not disclosed nor suggested by the Mukhopadhyay '255 reference. Nor is this suggested nor anticipated by the Dyke' 050 reference. Therefore, when the references are taken for the teachings as a whole, they are devoid of any teachings or guidance which would lead one of

ordinary skill in the art to the invention. Thus, the claimed invention cannot be made obvious by the combination or by each of the above references.

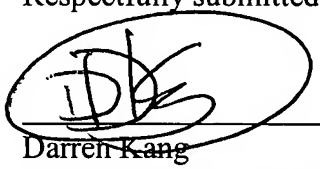
V. Conclusion:

In view of the above amendments and remarks, Applicants respectfully submit that the present application, including claims 1 and 3-34, is now in condition for allowance. Applicants request a favorable consideration.

Applicants attach herewith, for the Examiner's benefit, Fact Sheet of a preferred embodiment of the present invention (Appendix A). If the Examiner wishes to have the Fact Sheet resubmitted as an IDS, Applicants request that the Examiner contact Applicants' counsel at the number listed below.

Should the Examiner have any questions or concerns with respect to the above Amendments, and or remarks, the Examiner is respectfully requested to contact Applicants' undersigned counsel at the telephone number listed below.

Respectfully submitted,



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APPENDIX A

GE
Water & Process Technologies

Fact Sheet

DURATHERM

Spiral Wound Element for High Temperature Applications

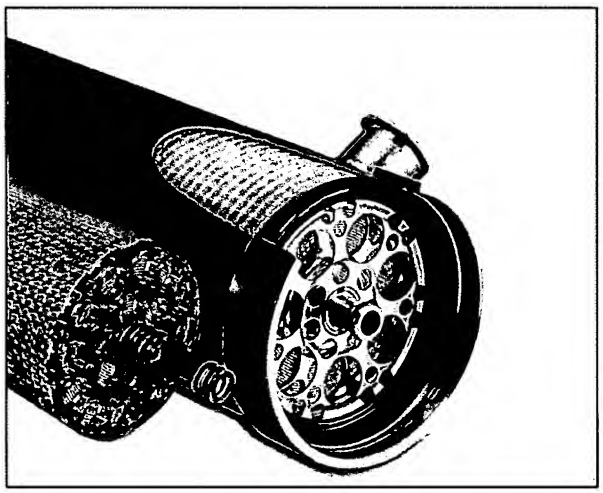

Figure 1: Duratherm Spiral Wound Element

Enhancing High Temperature Performance - The GE Approach

In a diversity of applications, hot water sanitization and continuous high temperature processing are essential to product quality and membrane system performance. Many industries must rely on chemicalfree, hot water sanitization to meet stringent product quality requirements. In addition, hot water sanitization effectively protects against detrimental bacterial growth on the membrane surface – thus limiting expensive replacement costs. Furthermore, continuous high temperature operation during the processing of valuable materials improves product yields while remaining both economical and energy efficient. Additional benefits of high temperature operation include:

1. Cleaning and Sanitization – Membrane systems treating biologically active feeds can be sanitized by periodic exposure to temperatures up to 90°C, without the use of ineffective or harmful chemicals.
2. Processing – Continuous, high temperature processing of industrial liquids and pure water up to 90°C results in reduced energy requirements and operational cost savings.
3. Efficiency and Cost Effectiveness – High temperature operation eliminates capital and operating expenditures associated with feed stream cool down prior to membrane processing.

Featuring a spiral wound design, GE Water & Process Technologies DURATHERM* membrane elements are specifically developed to maximize the benefits of high temperature operation. From standard to extreme operating parameters, GE DURATHERM membrane elements will improve your process application and enhance your overall system performance.

DURATHERM Family Line

The DURATHERM family of elements are utilized throughout a host of industries for various high temperature applications. DURATHERM elements are ideal for applications such as purifying hot boiler and evaporator condensate, dewatering hot product streams (evaporator replacement / enhancement), and dewatering hot waste streams (hot water recovery/stream concentration).

From beverage to textiles, GE has the most effective elements for high temperture applications. For more information on which DURATHERM element is best for your specific industry, please contact a GE representative.

Find a contact near you by visiting gewater.com or e-mailing custhelp@ge.com.

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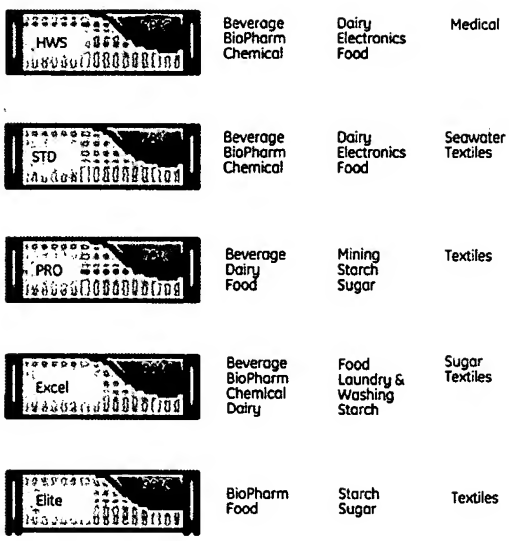

Figure 2: DURATHERM Applications

The DURATHERM Advantage

DURATHERM elements incorporate superb construction designed to provide reliable performance under extreme operating parameters. For instance, DURATHERM HWS can be hot water sanitized at temperatures as high as 90°C at low pressure, according to the GE specified protocol, while continuously operating below 50°C. And DURATHERM Elite can operate continuously on process liquids with temperatures up to 90°C. Utilizing high quality materials that conform to guidelines set by the FDA Code of Federal Regulations, Vol. 21, DURATHERM elements feature a patented DURASAN* protective sleeve. This sleeve provides sanitary operating conditions by maintaining a controlled flow between the element and pressure vessel wall, without the use of traditional brine seals. DURATHERM elements are available in a wide range of sizes and with a variety of membranes.

Utilizing DURATHERM Membrane Technology

With 30 plus years experience in membrane process technology, GE is renowned for developing customized solutions to difficult process challenges. For applications operating under unique operating parameters, such as extreme temperatures, GE provides support and easy-to-use tools to aid in appropriate product selection. For example, to better understand how operating pressure and system temperature affect membrane performance, GE has developed the Wagner Diagram.

Available on all DURATHERM specification collateral, this diagram will help you characterize the effect your process conditions may have on each product in the DURATHERM family.

To determine the potential for successful application of membrane technology in your process, GE will assist in:

Step 1: Thoroughly analyzing the entire system, including feed composition and required operating parameters

Step 2: Consulting the Wagner Diagram as a tool aiding in determining the correct membrane element for your application

Step 3: Pilot testing when necessary to discern the potential for successful applications

Help Us Help You

Remember, it is important that GE Technical Support be consulted for specifications and protocols when implementing DURATHERM products. For more information on the DURATHERM product line, call us today at one of the numbers listed on the back page. Ask for a no obligation, free consultation and let GE recommend a DURATHERM product to improve your process!

Table 1: High Temperature Product Line

Model	Temperature	Description
DURATHERM HWS[1]	Up to 50°C	This product is designed to withstand periodic exposure to high temperatures as high as 90°C for cleaning and chemical-free sanitization while operating below 50°C.
DURATHERM STD[1]	Up to 70°C	This product is designed to process fouling free water such as evaporator or hot boiler condensate.
DURATHERM PRO[1]	Up to 70°C	This product is designed for processes that would benefit from operating at elevated temperatures. It induces higher turbulence while reducing boundary layer formation.
DURATHERM Excel	Up to 80°C	This product has enhanced CIP capabilities. The open channel design can process liquids containing suspended solids while maintaining a low pressure drop across the element.
DURATHERM Elite	UP to 90·C	This robust design offers processing capabilities for applications requiring the most extreme operating parameters.

[1]Meets USDA and 3A standards